

## REMARKS

In accordance with the above amendments, new claims 115-125 have been added. It is anticipated that many of the claims previously presented will be withdrawn from consideration unless the restriction requirement itself is withdrawn by the Examiner.

In the Official Action, the Examiner has required restriction among some eleven claim groups which he believed to be separate inventions or groups of inventions which were not so linked as to form a single inventive concept under PCT Rule 13.1

In response to that requirement, applicants elect Group III containing claims 64-66, 68-71 and 75-81, drawn to a method of identifying a compound comprising pre-incubating  $T_{ck}$  cells and  $T_{ter}$  cells with a compound to be tested. This election is made with traverse as will be explained.

New claims 115-125 have been added to supplement existing claims 64-66 and 68-70 in the elected Group III. They are believed to be well supported by the materials previously of record and introduce no new matter to this application.

Specifically with regard to the restriction/election requirement and applicants' election of Group III, applicants believe that there is sufficient linkage between the groups of claims such that rejoinder and examination of all the claims is requested.

More particularly, however, applicants believe that the subject matter of the claims of Group VIII should be considered and examined at this time with the claims of Group III including the new added claims. This view is believed to be well supported as will presently be explained.

The invention of the presently elected claims derives from the investigation by the inventors into the pathways involved in stimulating inflammation, in particular in the synovium in rheumatoid arthritis (RA). The inventors have observed that  $T_{ck}$  cells, i.e., T cells activated by one or more cytokines, stimulate monocytes to produce factors such as  $TNF\alpha$  which are involved in inflammation. This new finding, thus, provides a pathway which can be targeted when seeking to prevent or treat inflammation, such as that associated with RA.

The invention common to Groups III and VIII identified by the Examiner is directed to methods for screening for compounds (such as antibodies) which can be used to target the  $T_{ck}$  cells. By inhibiting these cells, for example by blocking their ability to interact with monocytes, the production of inflammatory molecules such as  $TNF\alpha$  by the monocytes may be reduced.

Moreover, it should be noted that the antibodies of Group VIII are simply a subset of the compounds of Group III. All

the methods of these groups, as made clear in added claims 115-125, are directed to identifying compounds which act on the T<sub>ck</sub> cells in this pathway. It is therefore believed that the claims of Groups III and VIII are so closely related that they should be considered together in this application.

In response to the Examiner's requirement to elect a species, TNF $\alpha$  is elected. However, the invention clearly relates to the production of pro-inflammatory cytokines in general as claimed in claim 115. TNF $\alpha$  is an exemplified cytokine, but the invention applies more broadly than this. Similarly, the Examiner has suggested that TNF $\alpha$ , NF $\kappa$ B and PI3 kinase should be considered separately. However, all three of these form part of the same biochemical pathway. As claimed in claims 124 and 125, the activation of PI3 kinase and the inhibition of NF $\kappa$ B, in monocytes that have been contacted by T<sub>ck</sub> cells is simply an indicator that the release of pro-inflammatory cytokines such as TNF $\alpha$  has been stimulated. These are clearly related as three different ways of measuring the same biochemical effect.

It is therefore believed that the subject matter of both Groups III and VIII and, in particular, subject matter relating to pro-inflammatory cytokines, NF $\kappa$ B and PI3 kinase should all be considered together in the present application.

Rejoinder, early examination and allowance of the claims  
is respectfully requested.

Respectfully submitted,

NIKOLAI & MERSEREAU, P.A.

A handwritten signature in cursive script, appearing to read "C. G. Mersereau".

C. G. Mersereau  
Registration No. 26205  
Suite 820 International Centre  
900 Second Avenue South  
Minneapolis, MN 55402  
Telephone: (612) 339-7461



# CERTIFICATE OF MAILING

I hereby certify that the foregoing Amendment to an Official Action dated September 29, 2005, a Transmittal Letter and a Petition for a two-month Extension of Time, together with a check in the amount of \$450.00 for the extension fee, in connection with application Serial No. 10/088,801 of inventor(s), Fionula M. Brennan et al., filed September 18, 2002, for "THERAPEUTIC METHODS AND COMPOUNDS" are being sent by first class mail, postage prepaid and addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 14, 2005.

A handwritten signature in cursive script that reads "Barbara L. Davis".

Barbara L. Davis

On Behalf of C. G. Mersereau

Date of Signature: December 14, 2005